CLAIMS

What is claimed is:

1. A method for controlling operation of a drilling rig having a control management system, comprising:

a) programming said control management system with at least one resource module associated with at least one set of operating parameters, said at least one resource module having at least one operating model having at least one set of programmed operating rules related to the at least one set of operating parameters; and

b) providing an authenticating hierarchical access to at least one user to the at least one resource module.

2. The method of claim 1, further comprising allowing said at least one user to input an adjusted value for at least one of the set of operating parameters in the at least one resource module.

3. The method of claim 2, further comprising comparing said adjusted value to said at least one set of programmed operating rules and allowing adjustment if said adjusted value is within said operating rules, otherwise preventing adjustment of said value.

4. The method of claim 3, further comprising providing an indication if said adjusted value is not within said operating rules.

5. The method of claim 2, further comprising providing a supervisor override to prevent acceptance of said adjusted value.

6. The method of claim 1, wherein the authenticating hierarchical access is programmed at the rig site.

7. The method of claim 1, wherein a first allocated resource module having a first set of operating parameters is accessible to only one user at a time.

8. The method of claim 7, further comprising an interlock system preventing adjustment of an operating parameter of a second set of operating parameters of a second allocated resource module where said operating parameter of said second set of operating parameters is the same as an operating parameter of said first set of operating parameters.

9. The method of claim 7, further comprising an interlock system preventing adjustment of an operating parameter of a second set of operating parameters of a second allocated resource module where said operating parameter of said second set of operating parameters is indirectly related to an operating parameter of said first set of operating parameters.

10. The method of claim 1, further comprising requiring supervisor approval to accept said adjusted value.

11. The method of claim 1, further comprising providing remote access for communicating to the control system.

12. The method of claim 1, further comprising displaying said at least one set of operating parameters in at least one remote location.

13. The method of claim 1, wherein the at least one model and the at least one set of operating rules form a neural network for controlling the rig.

14. The method of claim 1, wherein the at least one set of operating rules are an expert system.

15. A method for controlling operation of a drilling rig having a control system, comprising:

a) programming said control management system with at least one resource module associated with at least one set of operating parameters, said at least one resource module having at least one operating model having at least one set of programmed operating rules related to the at least one set of operating parameters;

b) providing an authenticating hierarchical access to at least one user to the at least one resource module;

c) allowing said at least one user to input an adjusted value for at least one of the set of operating parameters in the at least one resource module;

d) comparing said adjusted value to said at least one set of programmed operating rules and allowing adjustment if said adjusted value is within said operating rules;

e) providing an indication if said adjusted value is not within said operating rules; and

f) providing a supervisor override to prevent acceptance of said adjusted value.

16. The method of claim 15, wherein the authenticating hierarchical access is programmed at the rig site.

17. The method of claim 15, wherein a first allocated resource module having a first set of operating parameters is accessible to only one user at a time.

18. The method of claim 17, further comprising an interlock system preventing adjustment of an operating parameter of a second set of operating parameters of a second allocated resource module where said operating parameter of said second set of operating parameters is the same as an operating parameter of said first set of operating parameters.

19. The method of claim 17, further comprising an interlock system preventing adjustment of an operating parameter of a second set of operating parameters of a second allocated resource module where said operating parameter of said second set of operating parameters is indirectly related to an operating parameter of said first set of operating parameters.

20. The method of claim 15, further comprising requiring supervisor approval to accept said adjusted value.

21. The method of claim 15, further comprising providing remote access for communicating to the control system.

22. The method of claim 15, further comprising displaying said at least one set of operating parameters in at least one remote location.

23. The method of claim 15, wherein the authenticating hierarchical access comprises using at least one of (i) a password, (ii) a physical key, (iii) a radio frequency identification device, (iv) a fingerprint device, (v) a retinal scan device; and (vi) an digital software key.

24. The method of claim 15, wherein the at least one model and the at least one set of operating rules form a neural network for controlling the rig.

25. The method of claim 15, wherein the at least one set of operating rules are an expert system.

26. A computer readable medium containing instructions that when executed cause a processor to control operation of a drilling rig according to the following method, comprising;

a) programming said control system with at least one resource module, said at least one resource module having at least one operating model having at least one set of programmed operating rules related to at least one set of operating parameters; and

b) providing an authenticating hierarchical access to at least one user to the at least one resource module.

27. The computer readable medium of claim 26, further comprising allowing said at least one user to input an adjusted value for at least one of the set of operating parameters in the at least one resource module.

28. The computer readable medium of claim 26, further comprising comparing said adjusted value to said at least one set of programmed operating rules and allowing adjustment if said adjusted value is within said operating rules, otherwise preventing adjustment of said value.

29. The computer readable medium of claim 26, further comprising providing an indication if said adjusted value is not within said operating rules.

30. The computer readable medium of claim 26, further comprising providing a supervisor override to prevent acceptance of said adjusted value.

31. The computer readable medium of claim 26, wherein the authenticating hierarchical access is programmed at the rig site.

32. The computer readable medium of claim 26, wherein the at least one resource module is accessible to only one user at a time.

33. The computer readable medium of claim 26, further comprising requiring supervisor approval to accept said adjusted value.

34. The computer readable medium of claim 26, further comprising providing remote access for communicating to the control system.

35. The computer readable medium of claim 26, further comprising displaying said at least one set of operating parameters in at least one remote location.

36. The computer readable medium of claim 26, wherein the at least one model and the at least one set of operating rules form a neural network for controlling the rig.

37. The method of claim 26, wherein a first allocated resource module having a first set of operating parameters is accessible to only one user at a time.

38. The method of claim 37, further comprising an interlock system preventing adjustment of an operating parameter of a second set of operating parameters of a second allocated resource module where said operating parameter of said second set of operating parameters is the same as an operating parameter of said first set of operating parameters.

39. The method of claim 37, further comprising an interlock system preventing adjustment of an operating parameter of a second set of operating parameters of a second allocated resource module where said operating parameter of said second set of operating parameters is indirectly related to an operating parameter of said first set of operating parameters.